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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/751,324

01/05/2004

Raminda Udaya Madurawe

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EXAMINER

CHANG, DANIEL D

ART UNIT

PAPER NUMBER

2819

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/751,324

Applicant(s)

MADURAWA, RAMINDA UDAYA

Examiner

Daniel D. Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2004.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 05 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/5/04.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Objections

Claims 1 and 17 are objected to because of the following informalities: There is no clear distinction between preamble and body of the claim. The claim must particularly point out and distinctly define the metes and bounds of the subject matter that will be protected by the patent grant. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Duong et al. (US 5,600,264, hereinafter, Duong).

Regarding claim 8, Duong discloses, in Figs. 2-5, a programmable logic device (PLD) (col. 1, lines 12+) comprising two selectable memory construction options (col. 4, lines 48+) to control logic, wherein: a first selectable option comprises a random access memory (RAM) construction (155; col. 4, lines 48+); and a second selectable option comprises a hard-wire read only memory (ROM) construction (155: col. 4, lines 48+).

Regarding claim 9, Duong discloses, in Figs. 2-5, wherein said first selectable option comprises a configuration circuit (col. 4, lines 52+) to configure said RAM.

Regarding claim 10, Duong discloses, in Figs. 2-5, wherein said second selectable option comprises mapping one of said first selectable option RAM bit patterns to a hard-wire ROM

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pattern (col. 4, lines 48+).

Regarding claim 11, Duong discloses, in Figs. 2-5, an input, said input received at an input-pad (inherent input pad in IC; see col. 1, lines 12+); and an output, said output generated at an output-pad (inherent input pad in IC; see col. 1, lines 12+); and an input to output signal propagation delay, said delay substantially identical (path with RAM and path with ROM will be identical when they both have buffered mode; see col. 4, lines 10+, col. 2, lines 6+) between said RAM and said ROM logic control options (col. 4, lines 48+).

Regarding claim 12, Duong discloses, in Figs. 2-5, wherein said RAM element is selected from one of volatile and non-volatile memory elements (col. 4, lines 48+).

Regarding claim 13, Duong discloses, in Figs. 2-5, wherein said RAM element is selected from one of fuse links, anti-fuse capacitors, SRAM cells, DRAM cells, metal optional links, EPROM cells, EEPROM cells, flash cells, ferro-electric elements, optical elements, electro-chemical elements and magnetic elements (col. 4, lines 48+).

Regarding claim 14, Duong discloses, in Figs. 2-5, a pass-gate logic element (col. 3, lines 40+), said logic element providing a programmable means of electrically connecting or disconnecting two nodes (see fig. 5).

Regarding claim 15, Duong discloses, in Figs. 2-5, wherein said programmable means in said first selectable option comprises configuring a RAM bit (col. 4, lines 48+), said RAM bit generating: a logic one output to connect said two nodes (with NMOS device, "1" to turn on; see col. 1, lines 50+, col. 5, lines 20+); and a logic zero output to disconnect said two nodes (with NMOS device, "0" to turn off).

Regarding claim 16, Duong discloses, in Figs. 2-5, wherein said programmable means in

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said second selectable option comprises hard-wiring a ROM bit (such as antifuse pull-up and pull-down; col. 4, lines 48+), said ROM bit providing: a hard-wire to power-bus (pull-up to power supply to turn on the NMOS device; see col. 1, lines 50+, col. 5, lines 20+) to connect said two nodes; and a hard-wire to ground-bus (pull-down to ground to turn off the NMOS device; see col. 1, lines 50+, col. 5, lines 20+) to disconnect said two nodes.

Claims 1-7 and 17-20 are essentially the same as claims 8-16 as discussed above and are rejected similarly.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Freeman (US 4,670,749) discloses integrated circuit programmable cross-point connection technique. Agrawal et al. (US 202/0186044 A1) discloses variable grain architecture for FPGA integrated circuits.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel D. Chang whose telephone number is (571) 272-1801. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on (571) 272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel D. Chang
Primary Examiner
Art Unit 2819

dc

DANIEL CHANG
PRIMARY EXAMINER